Rationale for targeting the pre-B-cell receptor signaling pathway in acute lymphoblastic leukemia.

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Public Summary:
Inhibitors of B-cell receptor (BCR) and pre-BCR signaling were successfully introduced into patient care for various subtypes of mature B-cell lymphoma (e.g., ibrutinib, idelalisib). Acute lymphoblastic leukemia (ALL) typically originates from pre-B cells that critically depend on survival signals emanating from a functional pre-BCR. However, whether patients with ALL benefit from treatment with (pre-) BCR inhibitors has not been explored. Recent data suggest that the pre-BCR functions as tumor suppressor in the majority of cases of human ALL. However, a distinct subset of human ALL is selectively sensitive to pre-BCR antagonists.

Scientific Abstract:
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